WHAT IS CLAIMED IS:

1. An image processing apparatus comprising:

discrimination means for discriminating a drawing object based upon object information corresponding to the drawing object;

developing means for developing the drawing object and obtaining developed image data which represents a developed image;

designation means for designating a region of the developed image based upon the object information corresponding to the drawing object that has been developed by said developing means;

shift-up means for shifting up the bits of image data corresponding to the region of the developed image: and

encoding means for entropy encoding the developed image data, in which the bits of the image data which have been shifted up by said shift-up means.

2. The apparatus according to claim 1, further comprising combining means for combining drawing objects based on the corresponding object information when combination of drawing objects is commanded;

wherein said developing means performs developing based upon the drawing objects combined by said combining means.

3. The apparatus according to claim 1, wherein said encoding means performs encoding while lowering the compression ratio of the developed image data corresponding to the region.

5

4. The apparatus according to claim 1, wherein said designation means designates the region in accordance with a degree of priority of object information that corresponds to the drawing object.

10

5. The apparatus according to claim 1, wherein the drawing object is described by a page description language.

15 6. An image processing method comprising:

a discrimination step of discriminating a drawing object based upon object information that corresponding to the drawing object;

an developing step of developing the drawing object

20 and obtaining developed image data which represents developed image;

a designation step of designating a region of the developed image based upon object information corresponding to the drawing object that has been

25 developed by said developing step;

shift-up step of shifting up the bits of image data

corresponding to the region of the developed image: and

an encoding step of entropy encoding the developed
image data, in which the bits of the image data which
have been shifted up by said shift-up step.

5

7.   The method according to claim 6, further comprising
a combining step of combining drawing objects based on
corresponding to object information drawing objects when
combination of drawing objects is commanded;

10   wherein said developing step performs developing
based upon the drawing objects combined at said
combining step.

8.   The method according to claim 6, wherein said

15   encoding step performs encoding while lowering the
compression ratio of the developed image data
corresponding to the region.

9.   The method according to claim 6, wherein said

20   designation step designates the region in accordance
with a degree of priority of object information that
corresponds to a drawing object.

10.   The method according to claim 6, wherein the

25   drawing object is described by a page description
language.

11. A computer-readable storage medium storing a
program for executing an image processing method,
the program comprising:

a discrimination step of discriminating a drawing
object based upon object information corresponding to
the drawing object;

an developing step of developing the drawing object
and obtaining developed image data which represents
developed image;

a designation step of designating a region of the
developed image based upon object information
corresponding to the drawing object that has been
developed by said developing step;

shift-up step of shifting up the bits of image data
corresponding to the region of the developed image: and

an encoding step of entropy encoding the developed
image data, in which the bits of the image data which
have been shifted up by said shift-up step.

12. A printing apparatus for printing an image on a
printing medium on the basis of input image data,
comprising:

input means for inputting image data;

acquisition means for acquiring attribute
information of each area of an image represented by the
image data input by said input means;

determination means for determining a compression

parameter for a designated area of an of the image on

the basis of the attribution information acquired by

said acquisition means;

5   compression means for compressing the image data

by using the compression parameter; and

output means for decompressing the image data

compressed by said compression means and outputting the

decompressed image data.

10

13.   The apparatus according to claim 12, wherein when

the image data is constituted by a print instruction,

said acquisition means analyzes contents of the print

instruction and acquires the attribute information on

15   the basis of the analysis result.

14.   The apparatus according to claim 12, wherein when

the image data is bitmapped image data, said acquisition

means segments the bitmapped image data into a plurality

20   of areas, and acquires the attribute information on the

basis of the result of the segmentation.

15.   The apparatus according to claim 12, wherein when

the image data includes an image area separation result

25   with respect to the bitmapped image data and the image

data of the bitmapped image, said acquisition means

acquires the attribute information on the basis of the image area separation result.

16.   The apparatus according to claim 12, wherein the attribute information indicates at least one of a character area, a graphic pattern area, and an image area.

17.   The apparatus according to claim 12, wherein the attribute information is information indicating at least one of the high-quality output area and a poor-quality output area.

18.   A control method for a printing apparatus for printing an image on a printing medium on the basis of input image data, comprising:

an input step of inputting image data;

an acquisition step of acquiring attribute information of each area of an image represented by the image data;

a determination step of determining a compression parameter for a designated area of the image on the basis of the attribution information acquired in said acquisition step;

a compression step of compressing the image data by using the compression parameter; and

an output step of decompressing the image data
compressed in said compression step and outputting the
decompressed image data.

5   19.   The method according to claim 18, wherein in a
case where the image data is constituted by a print
instruction, in said acquisition step, contents of the
print instruction are analyzed and the attribute
information is obtained on the basis of the analysis
10   result.

20.   The method according to claim 18, wherein in a
case where the image data is bitmapped image data, in
said acquisition step, the image data is segmented into
15   areas, and the attribute information is acquired on the
basis of the result of the segmentation.

21.   The method according to claim 18, wherein in a
case where the image data includes an image area
20   separation result with respect to the bitmapped image
data and the image data of the bitmapped image, in said
acquisition step, the attribute information is acquired
on the basis of the image area separation result.

25   22.   The method according to claim 18, wherein the
attribute information indicates at least one of a

character area, a graphic pattern area, and an image area.

23.   The method according to claim 18, wherein the attribute information is information indicating at least one of the high-quality output area and a poor-quality output area.

24.   An image processing apparatus comprising:
    developing means for analyzing a plurality of commands representing a drawing object and developing bit-mapped image data for one page;
    transformation means for transforming the bit-mapped image data by using a wavelet transformation and generating transformed coefficients for the one page;
    designation means for designating a region of an image represented by the bit-mapped image data based upon the result of analyze by said developing means;
    shift-up means for shifting up the bits of bit-mapped image data corresponding to the region of the image designated by said designation means: and
    entropy encoding means for entropy encoding the bit-mapped image data, in which the bits of bit-mapped image data corresponding to the region which have been shifted up by said shift-up means.

25.   The apparatus according to claim 24, further
comprising:

       decode means for decoding code data encoded by
said entropy encoding means and generating bit-mapped
5   image data for one page; and

       print means for printing based on the bit-mapped
image data.

26.   The apparatus according to claim 24, wherein the
10   command is described by using a page description
language.

27.   An image processing method comprising the steps
of:
15   analyzing a plurality of commands representing a
drawing object and developing bit-mapped image data for
one page;

       transforming the bit-mapped image data by using a
wavelet transformation and generating transformed
20   coefficients for the one page;

       designating a region of an image represented by the
bit-mapped image data based upon the result of analyze
in said developing step;

       shifting up the bits of bit-mapped image data
25   corresponding to the region of the image designated in
said designation step: and

entropy encoding the bit-mapped image data, in which the bits of bit-mapped image data corresponding to the region which have been shifted up in said shifting up step.

5

28. A computer-readable memory storing program codes for controlling a printing apparatus for printing an image on a printing medium on the basis of input image data, comprising:

10   a input step module for inputting image data;

    a acquisition step module for acquiring attribute information of each area forming the image data;

    a determination step module for determining a compression parameter for a designated area of the image

15 data on the basis of the attribution information acquired by said acquisition step module;

    a compression step module for compressing the image data by using the compression parameter; and

    an output step module for decompressing the image

20 data compressed in said compression step module and outputting the decompressed image data.

29. A computer-readable memory storing program codes for controlling a printing apparatus for printing an image on a printing medium on the basis of input image

25 data, comprising:

    a developing step module of analyzing a plurality

- 61 -

of commands representing a drawing object and developing bit-mapped image data for one page;

a transforming step module of transforming the bit-mapped image data by using a wavelet transformation and generating transformed coefficients for the one page;

a designation step module of designating a region of an image represented by the bit-mapped image data based upon the result of analyze in said developing step module;

a bit shift-up step module of shifting up the bits of bit-mapped image data corresponding to the region of the image designated in said designation step module: and

an entropy encoding step module of entropy encoding the bit-mapped image data, in which the bits of bit-mapped image data corresponding to the region which have been shifted up in said bit shift-up step module.